



# Jefferson Lab Alignment Group

## Data Transmittal

**TO:** K. Macha

**DATE:** 03 Jul 2007

**FROM:** J. Dahlberg

**Checked:** TS

**# :** M1116

**DETAILS:**

Below are the results from the survey performed on the BNAL helium vessel. A right handed coordinate system was established with the Z axis centered on the BL flanges and rotated parallel to the FPC blank off flange bottom surface. A +Z is towards the field probe end, and a +Y is towards the He return header (up). A +pitch is counter clockwise looking toward +X, a +yaw is ccw from above, and a +roll is cw looking down the Z axis toward the field probe end. Values are in millimeters and degrees. Note: Only one side of each support block was accessible for an X dimension. Also, roll on the BL flanges is to the bolt hole pattern.

LOCATION	Z	X	Y	Pitch	Yaw	Roll
BL flange:						
Coupler end	-105.43	0.00	0.00	-0.009°	-0.146°	-0.563°
FP end	1415.80	0.00	0.00	+0.017°	-0.061°	-0.418°
FPC flange:						
Inside flange	0.00	-0.33	-160.78			
Blank off	-0.20	-0.31	-195.50			
Support blocks:						
Coupler end						
bottom -x corner		-42.62	-290.30			-1.382°
Field probe end						
bottom +x corner		27.57	-290.70			-1.386°
He return header	384.47	6.28	343.01	-0.385°		-1.419°
Nitronic rod support ends:						
1	122.90	157.19	189.30			
2	123.22	158.03	-189.48			
3	122.27	-158.51	-190.52			
4	121.62	-158.66	189.62			
5	1201.20	-155.28	190.88			
6	1199.54	-161.22	-189.13			
7	1198.24	154.84	-191.53			
8	1200.57	159.33	187.13			